

1. *Staphylococcus aureus* (S. aureus) is a Gram-positive, spherical bacterium that is commonly found on the skin and in the nose of humans and animals. It is a leading cause of skin infections, such as abscesses and impetigo, and can also cause more serious infections, such as pneumonia and sepsis.

1           1. A system comprising:  
2           a radio modem unit; and  
3           an RF signal booster unit, wherein the booster unit is connectable to  
4           the RF signal booster unit with a connector adapted to transmit RF signals,  
5           wherein a DC offset at the connector is detected to determine whether the booster  
6           unit is connected to radio modem.

1                    2. The system of Claim 1, wherein the connector connects to a  
2                    connection line between the radio modem unit and the booster unit.

1                    3. The system of Claim 1, wherein the offset detection circuitry is  
2                    located within the radio modem unit.

1                   4. The system of Claim 1, wherein the offset detection circuitry  
2 includes an inductor to allow the DC offset to be placed onto the connector, but  
3 not allow radio frequency energy to pass up into the auto-detect circuit.

1                    5. The system of Claim 1, wherein the booster unit includes an  
2                    element to reduce the DC power level to low if the radio modem unit is connected  
3                    to the booster unit.

1                    6. The system of Claim 5, wherein the elements in the booster unit  
2       include an inductor.

1                    7. The system of Claim 1, wherein the voltage at the connector of the  
2       radio modem unit is high if no booster unit is connected but is low if a booster unit  
3       is connected.

1 8. A radio modem unit comprising:

2 a radio;  
3 an RF signal connector operably connected to the radio, the connector  
4 being connectable to a RF antenna or a booster unit; and  
5 a detector unit adapted to detect a DC offset at the connector to  
6 determine whether the connector is connected to a booster unit.

1                    9. The radio modem unit of Claim 8, wherein the connector is  
2                    connectable to a connector line which can connect the radio modem unit to a  
3                    booster unit.

1                    10.       The radio modem unit of Claim 8, wherein the DC offset of  
2       the connector is high if no booster unit is connected but is low if a booster unit is  
3       connected.

1            11.            The radio modem unit of Claim 8, wherein an inductor is  
2            used as part of an auto-detect circuit.

1                    12.           The radio modem unit of Claim 8, wherein the radio modem  
2           unit is connected to a booster unit, the booster unit including a circuit to pull the  
3           DC offset at the connector to low.

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4 booster unit until a valid power control message is received from the radio  
5 modem.

1 20. The RF signal booster unit of Claim 19, wherein the switch  
2 includes a pair of diodes.

1 21. The system of Claim 20, wherein the current flows through  
2 the diodes, the RF impedance of the diodes is reduced, turning the switch to  
3 closed, but when current is not flowing through the diodes, the RF impedance of  
4 the switch is high.

1 22. Method of using a radio modem unit and an RF signal  
2 booster unit, the booster unit and radio modem unit connectable using a connector,  
3 the method comprising:

4 in the radio modem unit, detecting a DC offset on the connector to  
5 determine whether the booster unit is connected;

6 if the booster unit is connected, transmitting baseband signals on the  
7 connector from the radio modem to the booster unit to allow the booster unit to  
8 prepare for transmission; and

9 thereafter, transmitting an RF signal on the connector from the radio  
10 modem to the booster unit.

1                    23.           The method of Claim 22, wherein the connector line  
2           connects between the radio modem unit and an RF signal booster unit.

1                    24.           The method of Claim 22, wherein the baseband signal is the  
2           power control signal.

1            25.        The method of Claim 24, wherein the power control signal  
2 includes a channel control and power level indications.

**Figure 6**